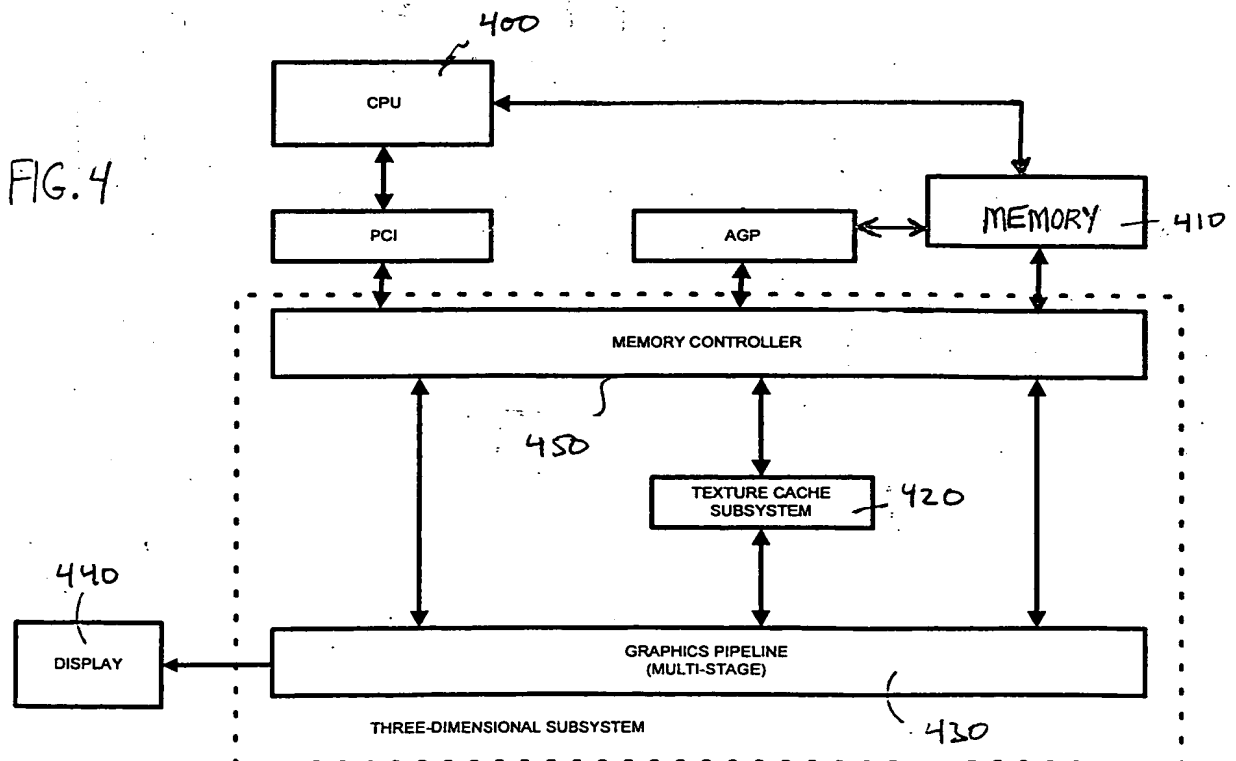
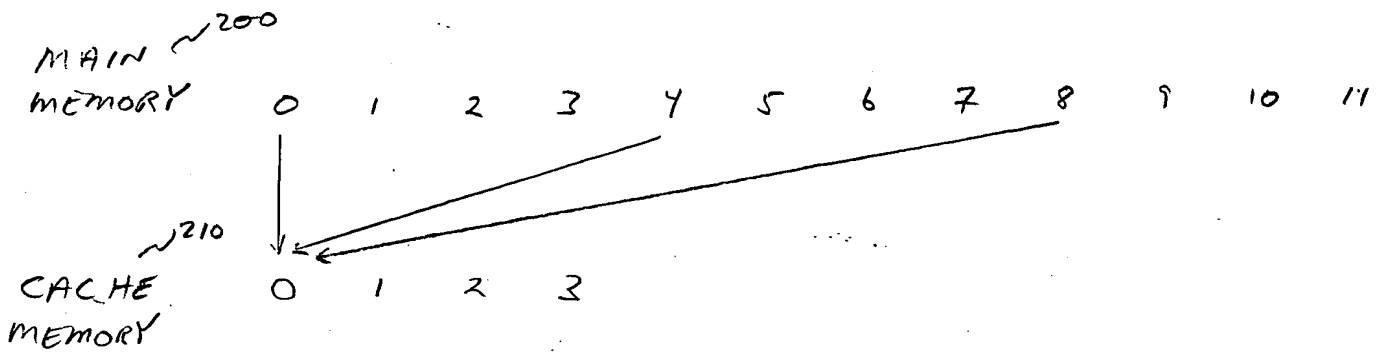


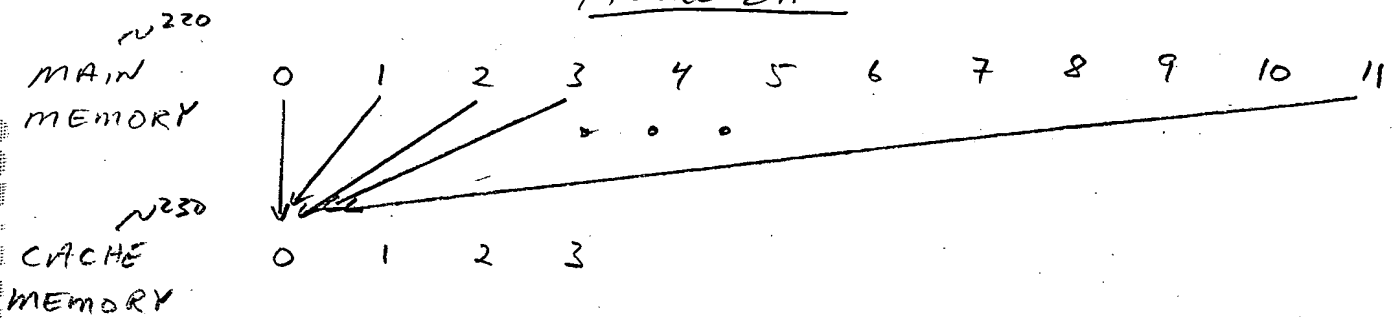
FIG. 1 (PRIOR ART)



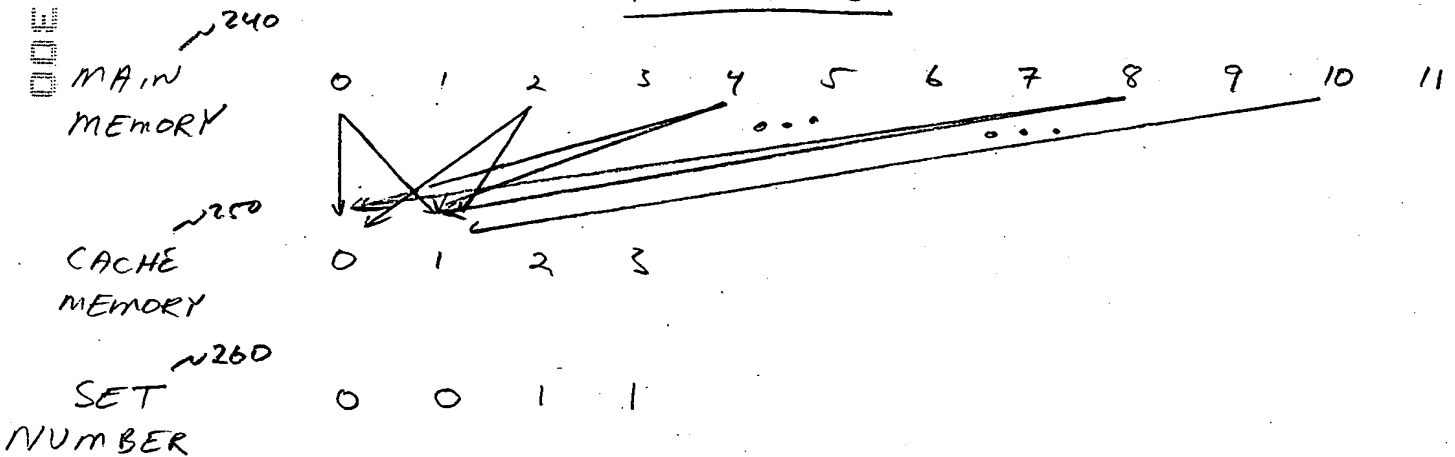
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DIRECT MAPPING
FIGURE 2A



FULLY ASSOCIATIVE
FIGURE 2B



2-WAY SET ASSOCIATIVE

FIGURE 2C

00EFFF"2E92F260

~300

MAIN

MEMORY

0	1	2	3	4	5	...	11	~310
0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	~320

↑

~330

CACHE

MEMORY

0	1	2	3	~340
0 1 2 3	0 1 2 3	0 1 2 3	0 1 2 3	~350

010010
390 385 380

SET

NUMBER

0	1	1	~360
---	---	---	------

Figure 3.

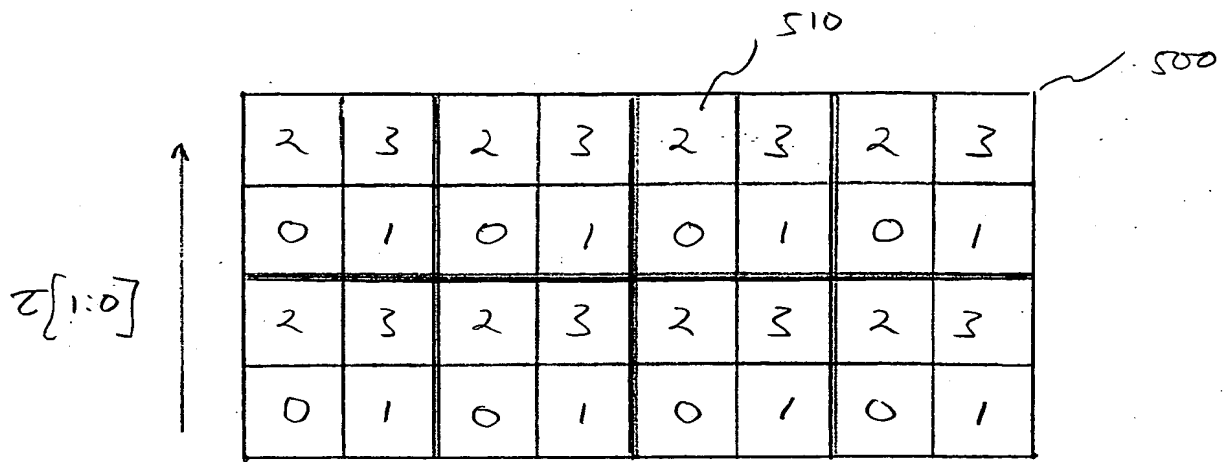


Figure 5A

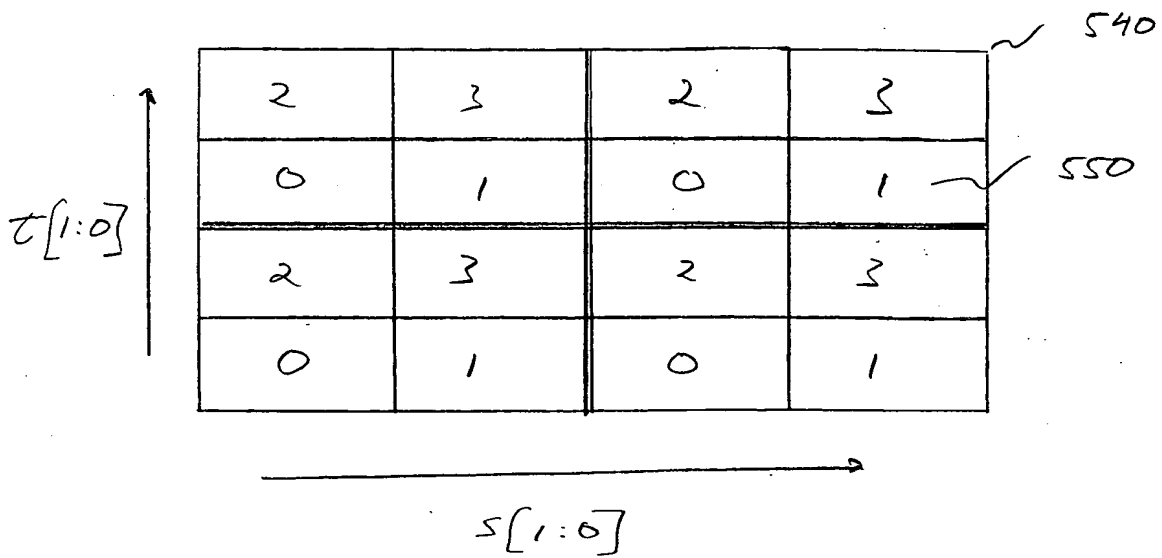


Figure 5B

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09712632.111300

$\tau[4:2]$

28	29	30	31	60	61	62	63	600
24	25	26	27	56	57	58	59	610
20	21	22	23	52	53	54	55	
16	17	18	19	48	49	50	51	
12	13	14	15	44	45	46	47	
8	9	10	11	40	41	42	43	
4	5	6	7	36	37	38	39	
0	1	2	3	32	33	34	35	

$s[4:3]$ $s[4:3]$

Line index = 0 Line index = 1

Figure 6

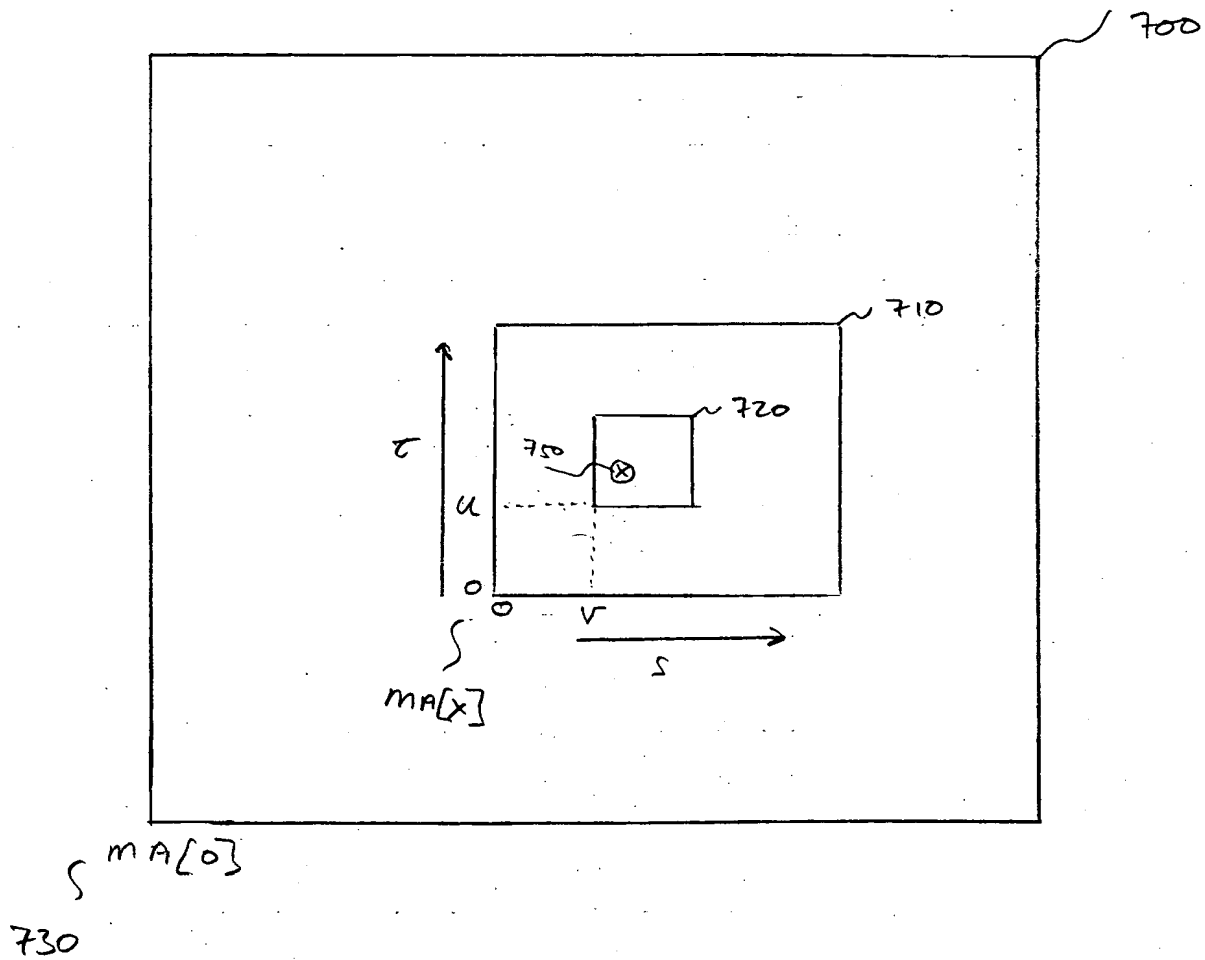


Fig. 7

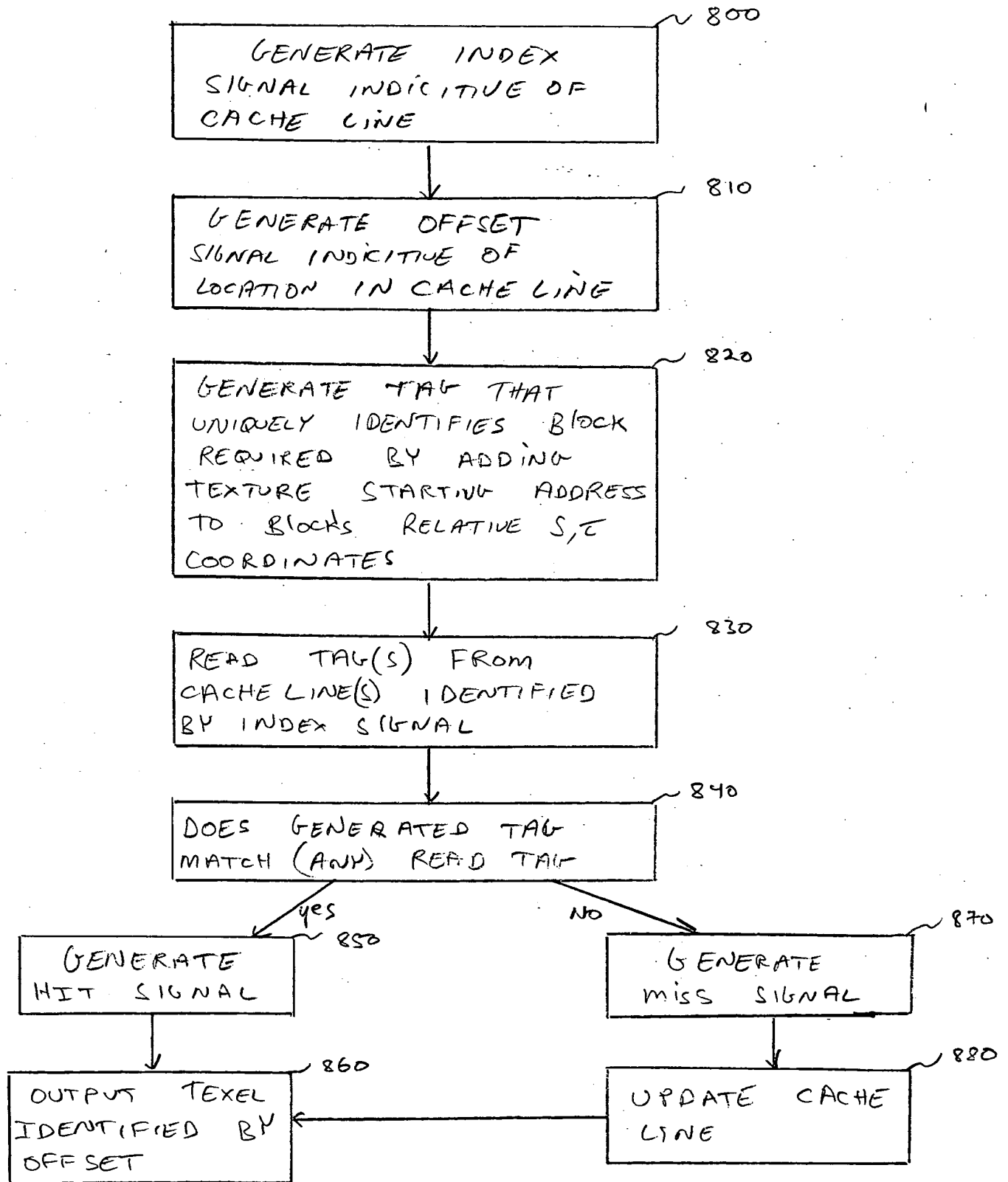


Fig. 8

Figure 9

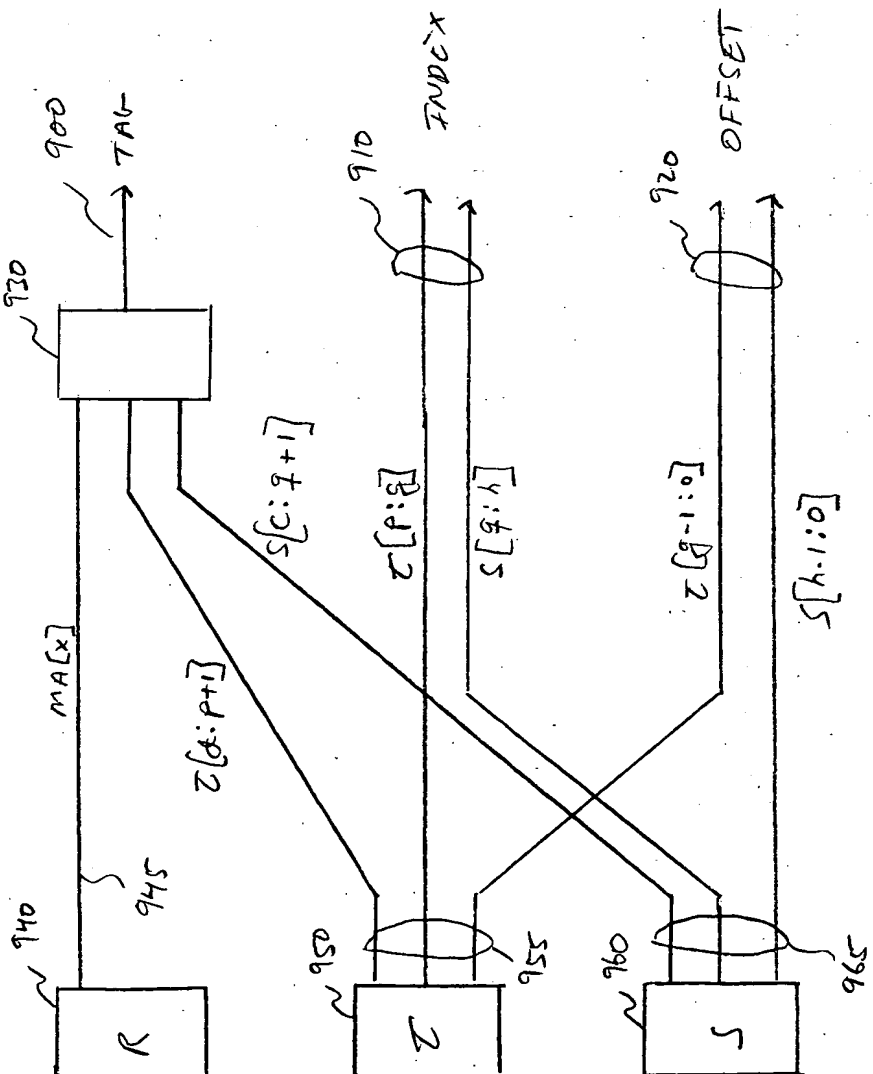


Diagram illustrating a memory layout for a 32-bit system, showing two 16-bit words (L00[0] and L00[1]) and their internal structure.

Word L00[0] (Address 00000000 00000000 00000000 00000000):

28	29	30	31	60	61	62	63
24	25	26	27	56	57	58	59
20	21	22	23	52	53	54	55
16	17	18	19	48	49	50	51
12	13	14	15	44	45	46	47
8	9	10	11	40	41	42	43
4	5	6	7	36	37	38	39
0	1	2	3	32	33	34	35

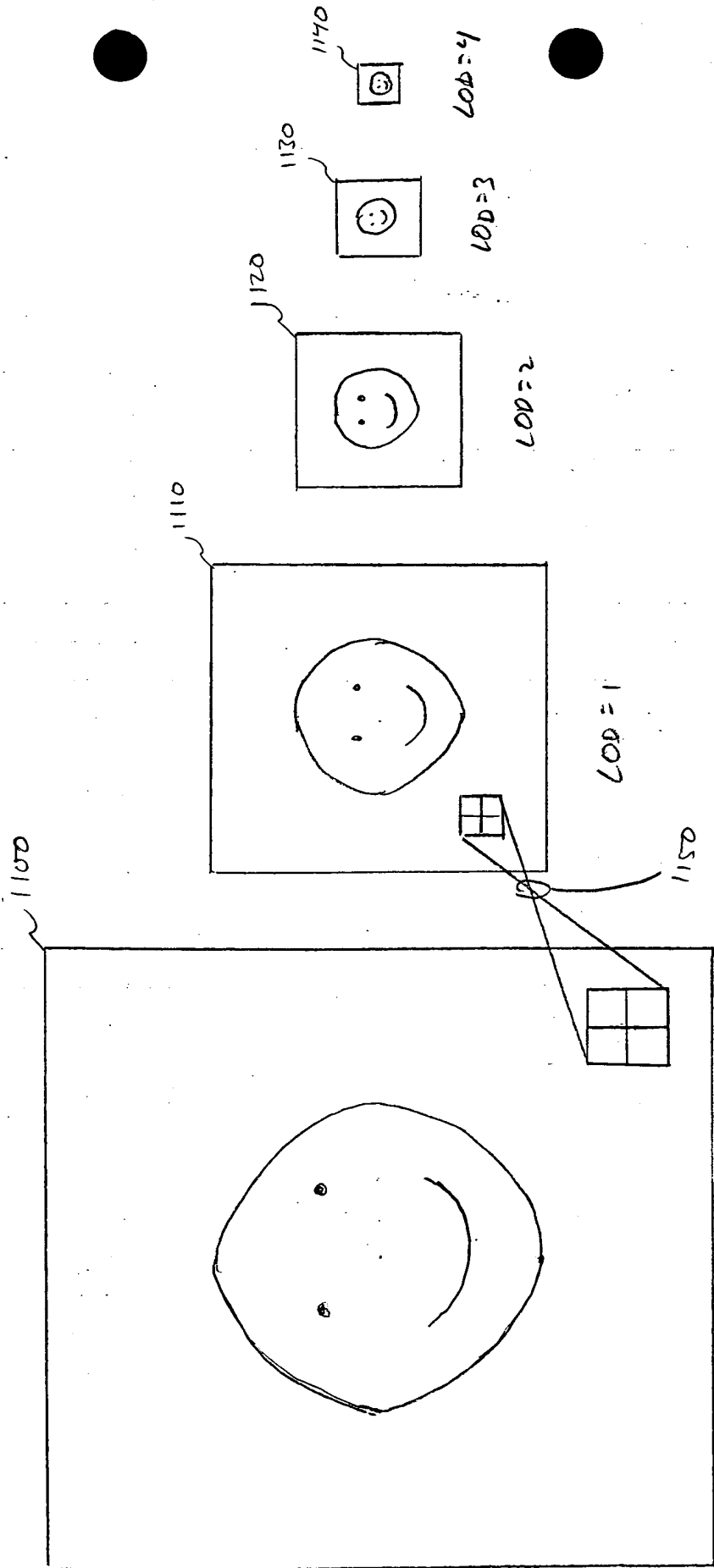
Labels: $L00[0]$, $T[3:2]$, $S[4:3]$, Line index = 0

Word L00[1] (Address 00000000 00000000 00000000 00000000):

28	29	30	31	60	61	62	63
24	25	26	27	56	57	58	59
20	21	22	23	52	53	54	55
16	17	18	19	48	49	50	51
12	13	14	15	44	45	46	47
8	9	10	11	40	41	42	43
4	5	6	7	36	37	38	39
0	1	2	3	32	33	34	35

Labels: $L00[1]$, $T[3:2]$, $S[4:3]$, Line index = 1

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LOD=0

Fig. 11

Figure 12

09712632 11300

Texid[0]

Texid[0]

		28	29	30	31	60	61	62	63	1300
		24	25	26	27	56	57	58	59	
$\tau[3:2]$		20	21	22	23	52	53	54	55	
		16	17	18	19	48	49	50	51	
		12	13	14	15	44	45	46	47	
		8	9	10	11	40	41	42	43	
$\tau[3:2]$		4	5	6	7	36	37	38	39	
		0	1	2	3	32	33	34	35	
		$s[4:3]$				$s[4:3]$				
		Line index = 0				Line index = 1				

Fig. 13

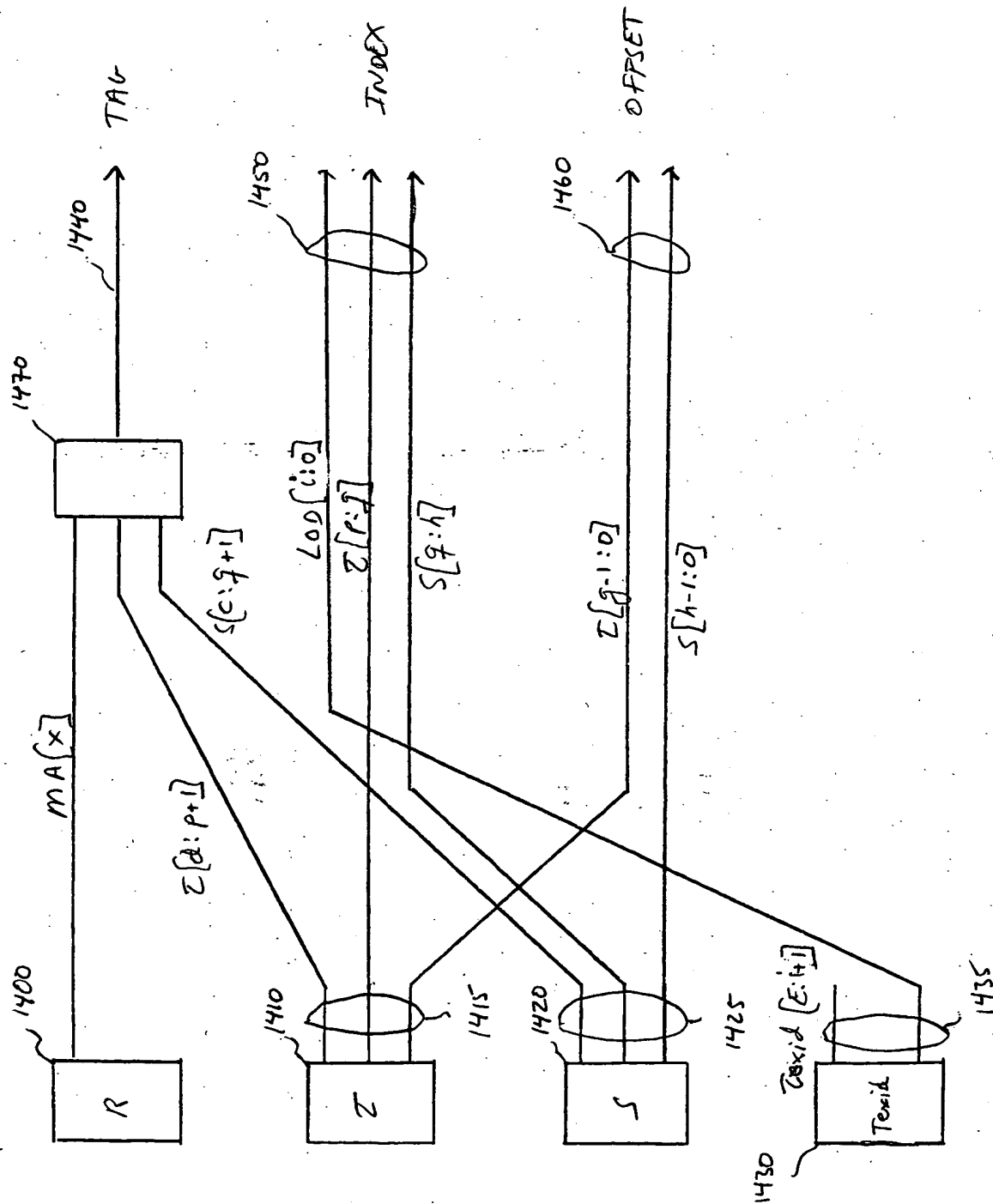


Figure 14

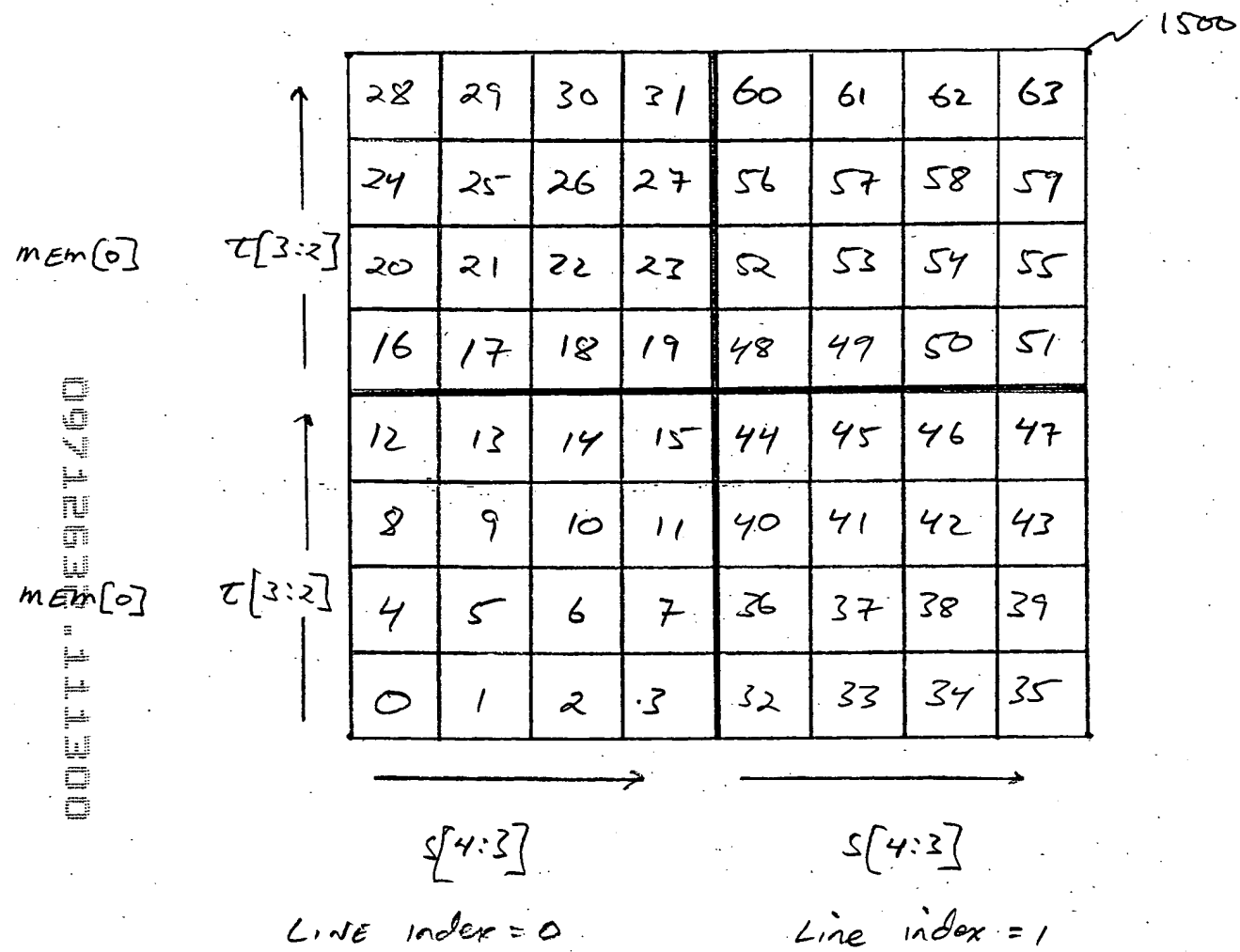


Fig. 15

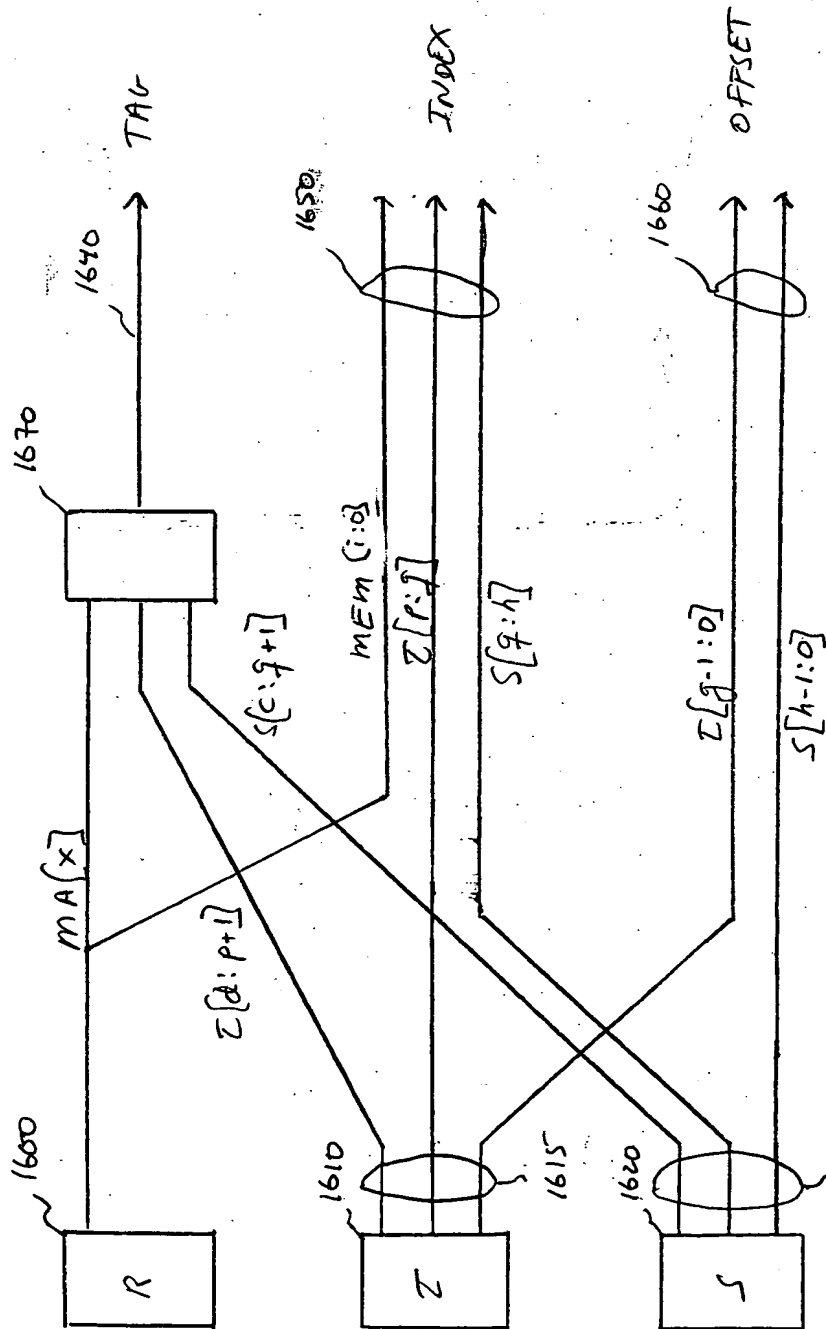


Figure 16

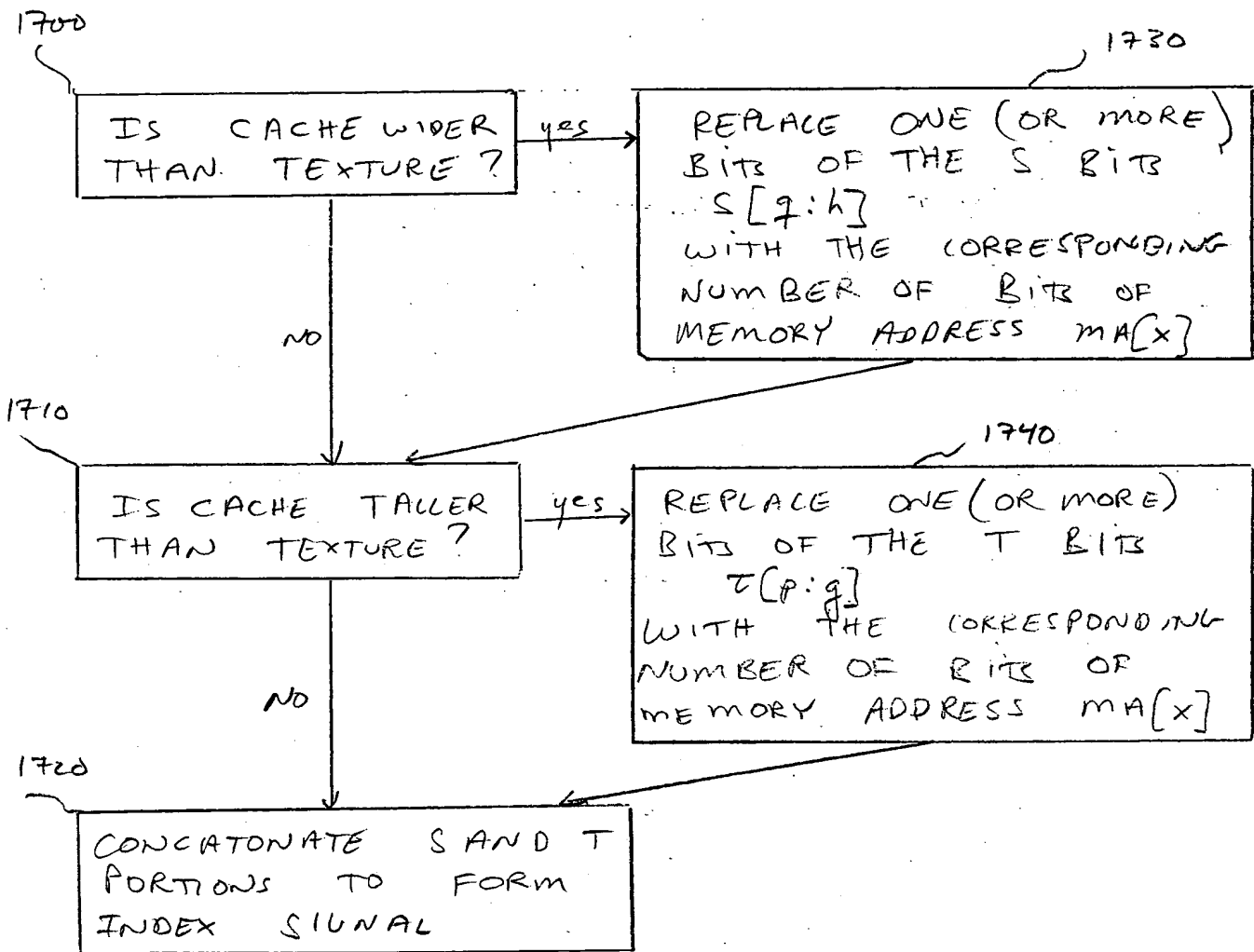


FIGURE 17.

09712632 111900

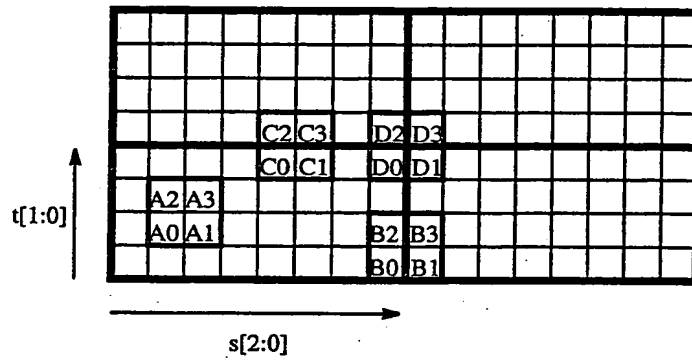


Figure 20

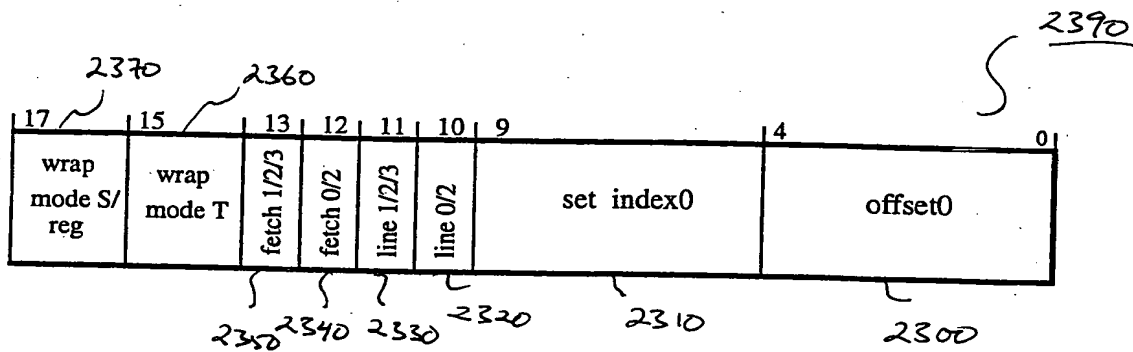


Figure 23

09712632 111300

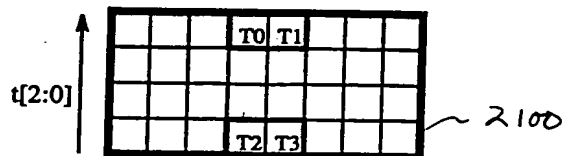
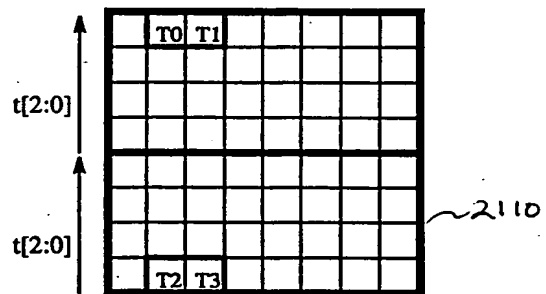
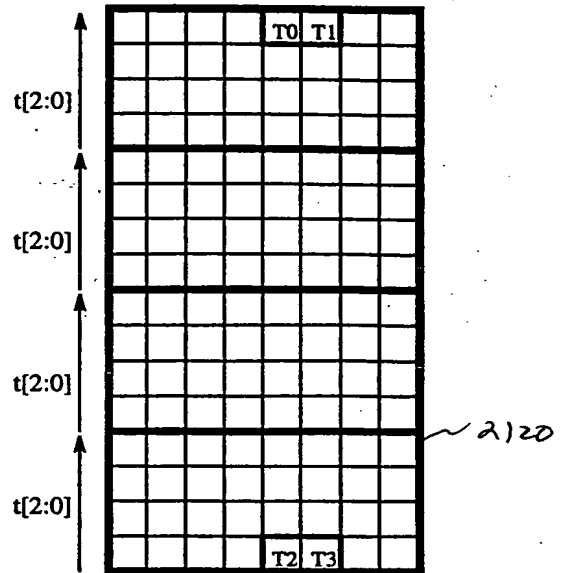
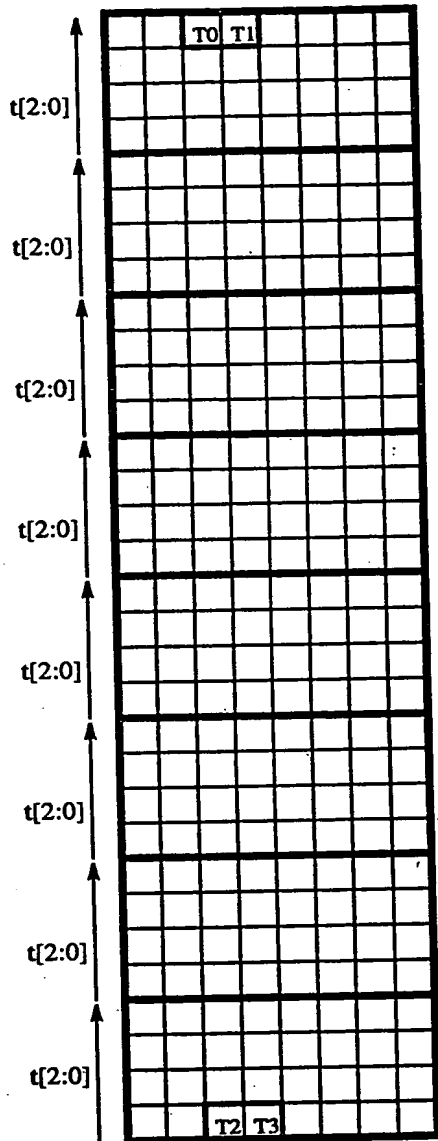


Figure 21

09712632-11300

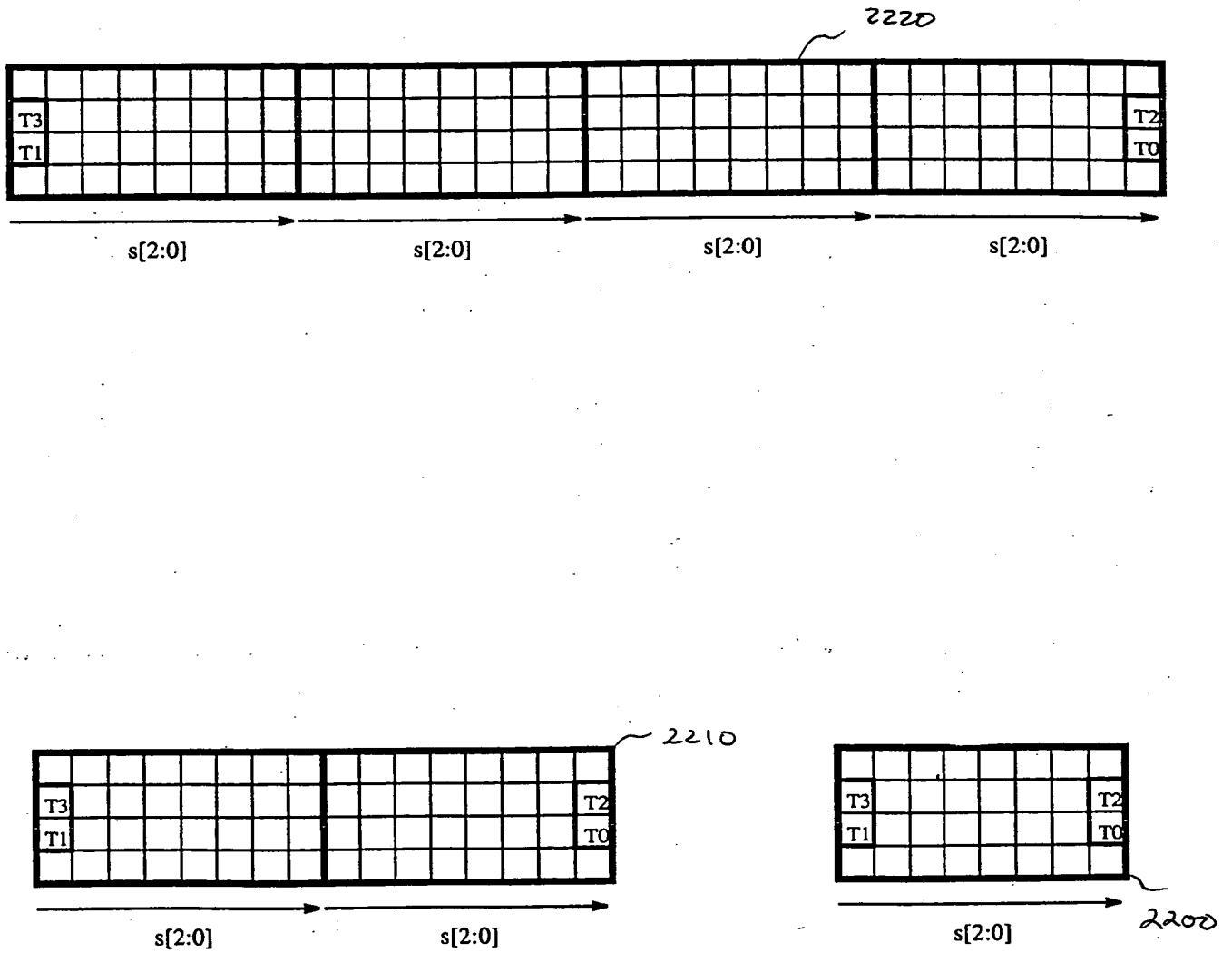


Figure 22

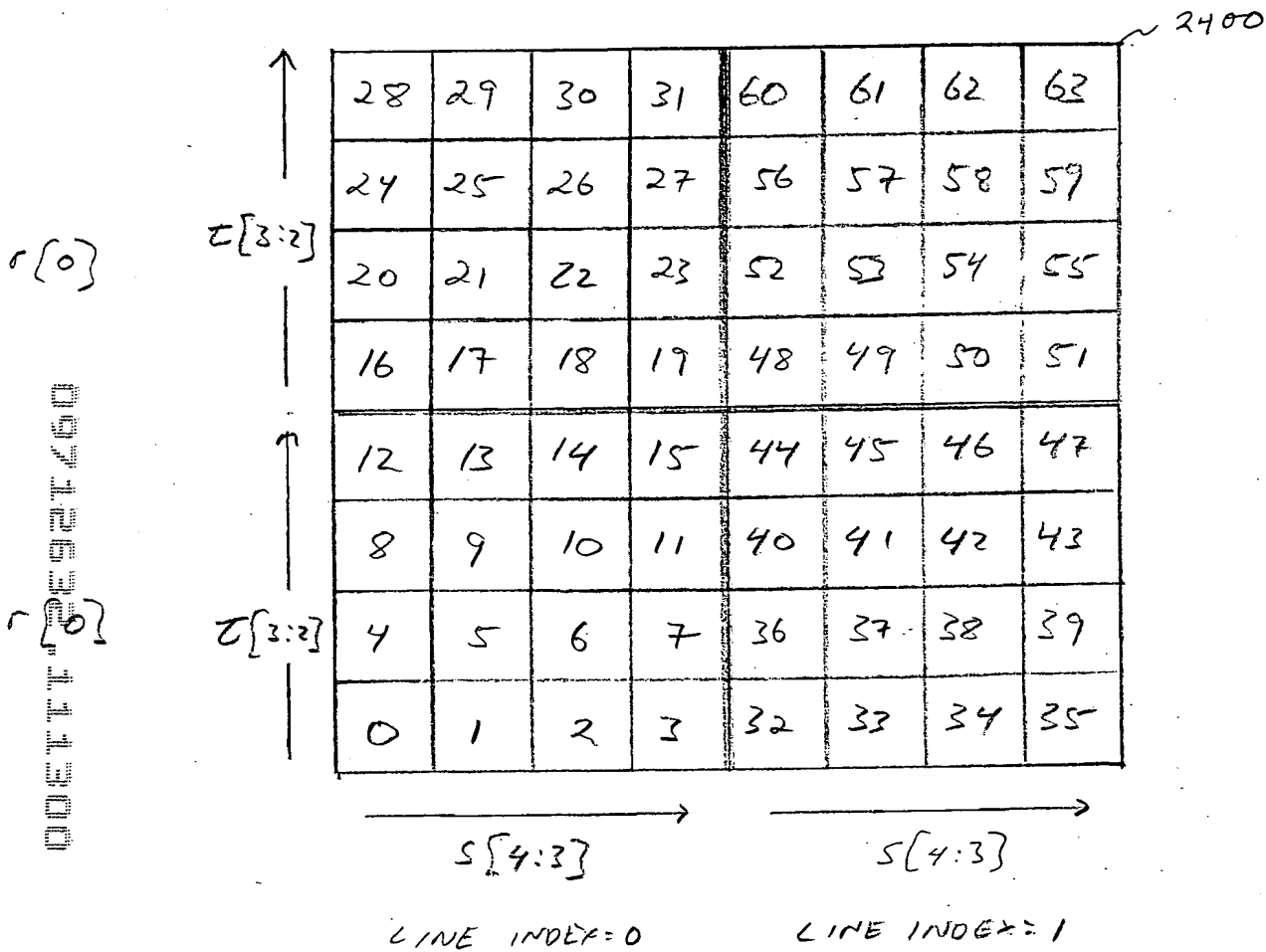


FIGURE 24

09712632 111300

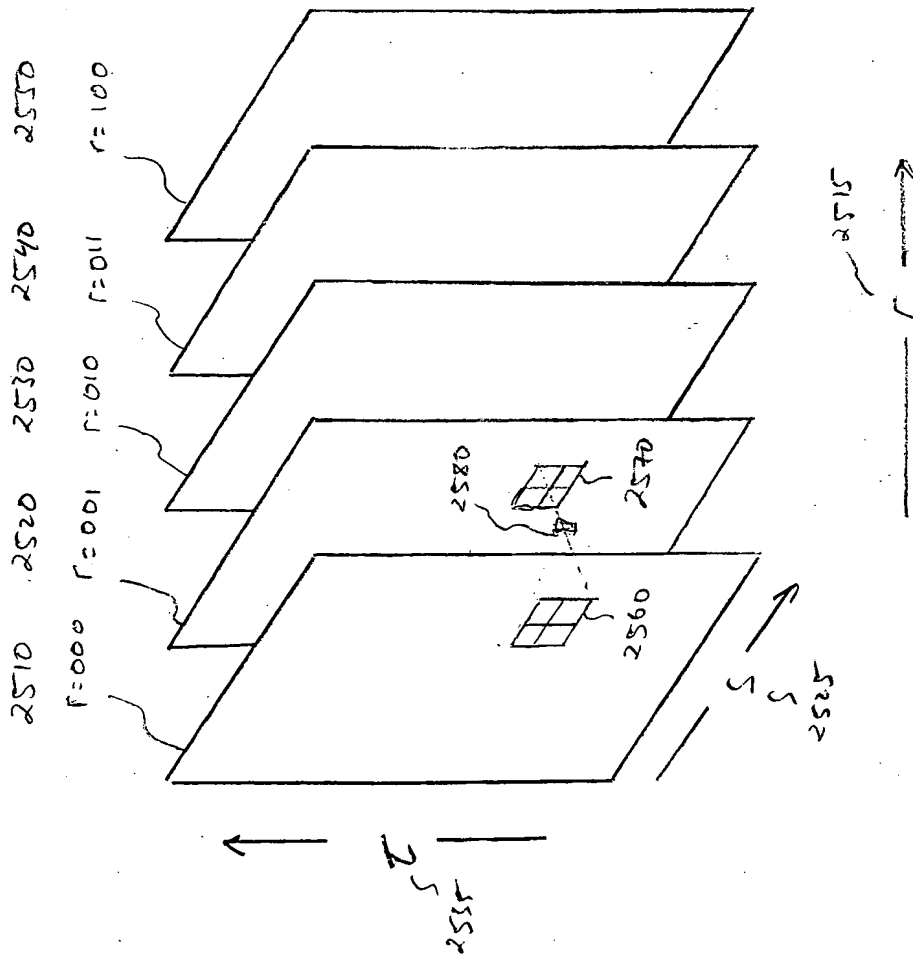


FIGURE 25

2500

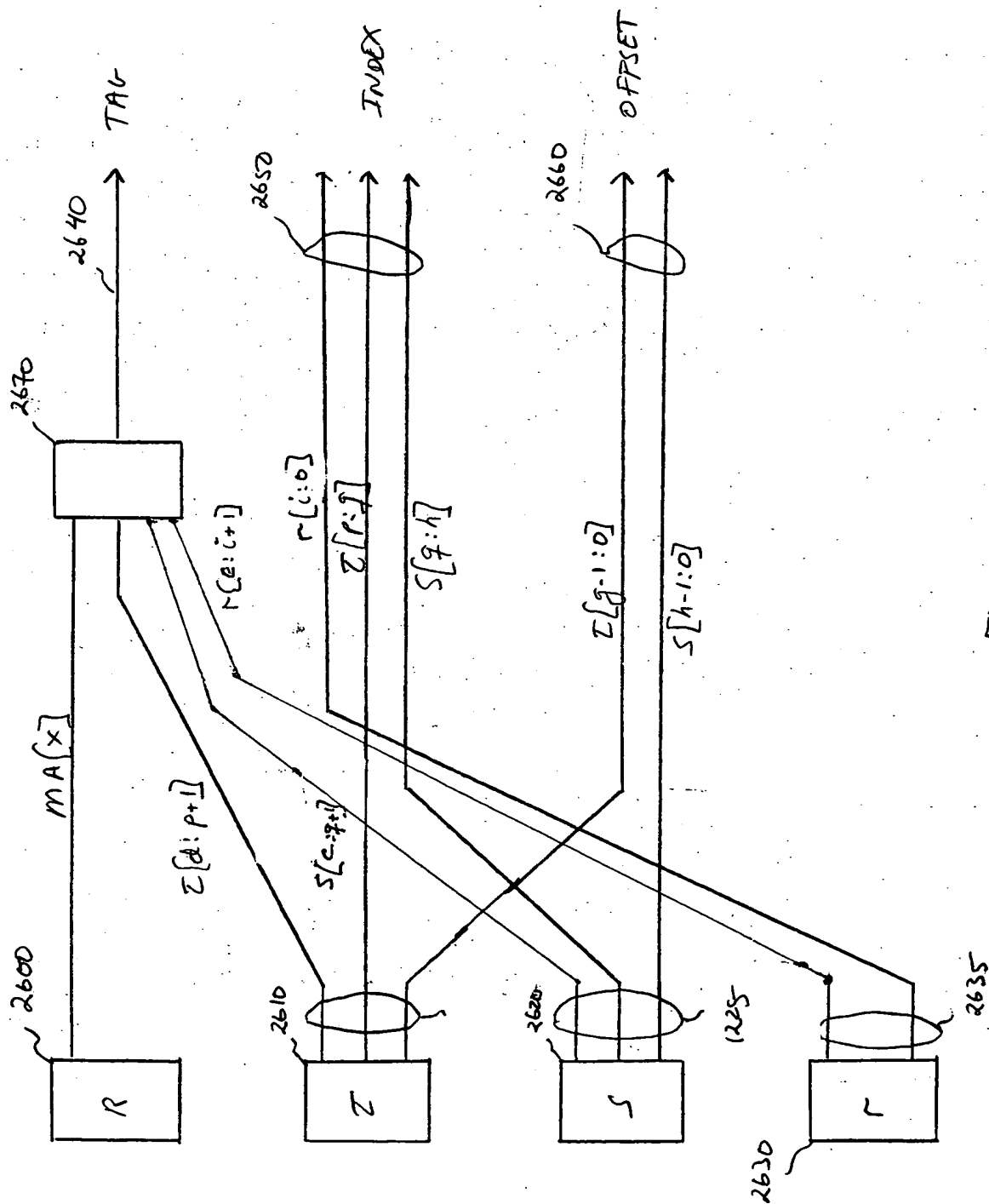


Figure 26